

BLASTICOTOMIDÆ IN THE MIOCENE OF FLORISSANT, COLORADO (HYMENOPTERA SYMPHYTA)

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Among the fossil sawflies discovered at Florissant, Colorado, in Miocene beds was one described by Brues (1908) as being a very peculiar Tenthredinid, which he placed in a new genus and called *Paremphytus ostentatus*. At the same time he confessed that he had "not been able to locate the specimen with any degree of satisfaction." Rohwer (1908, p. 526) is also struck by the remarkable wing-venation of this insect, which he placed in the Tenthredinid subfamily Phyllotominæ.

Neither of these authors was familiar with the *Blasticotomidæ* which are only known now to occur in the palæarctic region and neither of them therefore recognized the remarkably similar wing-venation of the fossil *Paremphytus* and the living *Blasticotoma* (cf. Brues 1908, fig. 6 and MacGillivray 1906, fig. 44). The placing of *Paremphytus* in the *Blasticotomidæ* is further supported by its apparently argid-like antennæ as in that family.

Brues says: "Antennæ stout and thick and possibly with the last joint long as in *Arge* and its allies. However, this character is not very plainly to be seen on the specimen. . . . The similarity of the antennæ to those of *Arge et al.* is very striking, but it is possible that the last joint is in reality several closely united ones."

Unfortunately without the claws of the insect it is impossible to tell whether *Paremphytus* is likely to be synonymous with either of the two known recent genera of *Blasticotomidæ*, *Blasticotoma* or *Runaria*. Living members of the family now represent five known species and one subspecies. *B. filiceti* Klug is known in Europe and also as a distinct subspecies in east Asia including Japan. The four other species are limited to Japan and east Asia. As these insects are not often found on the wing even in districts where the larvæ are known to

occur, living representatives of the family may yet be found in North America. The only described larva, that of *B. filiceti* Klug (Meijere 1911, p. 86, pl. v, figs. 1-12), is without abdominal legs and bores in a fern-stem, producing a peculiar irregular ball of froth about the size of a walnut on the side of the stem. The presence of the insect in a district is usually most easily detected by these balls of froth.

The representation of this family among the Florissant fossils is specially interesting because of the extreme rarity of the adults of the living species and suggests that they may have been more common as well as more widely distributed in Miocene times.

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